

THE GENUS *STRONGYLOPSIS* BRAUNS (HYMENOPTERA, ICHNEUMONIDAE) FROM CHINA, WITH DESCRIPTION OF A NEW SPECIES

HE Jun-Hua¹, LIU Jing-Xian^{2*}

1. Institute of Insect Sciences, Zhejiang University, Hangzhou 310058, China; E-mail: jhhe@zju.edu.cn

2. College of Natural Resource and Environment, South China Agricultural University, Guangzhou 510640, China

Abstract The genus *Strongyloopsis* Brauns, 1896 from China is reviewed. A new species, *Strongyloopsis xizangensis* sp. nov., from Xizang Autonomous Region is described and illustrated. A key to the known species of *Strongyloopsis* is provided. All type specimens are deposited in the Collection of Parasitic Hymenoptera of Zhejiang University.

Key words Pimplinae, Pimplini, *Strongyloopsis*, new species.

1 Introduction

The genus *Strongyloopsis* is a small and Palearctic genus of tribe Pimplini in subfamily Pimplinae of Ichneumonidae and is composed of six species: *S. anomala* Brauns, *S. belua* Kuzin, *S. rufiventris* Victorov, *S. abdominalis* Kasparyan, *S. victorovi* Kasparyan and *S. chinensis* He (Brauns, 1896; Kuzin, 1950; Victorov, 1958; Kasparyan, 1974, 1981; He *et al.*, 1996; Yu and Horstmann, 1997; Yu *et al.*, 2005). For the Chinese fauna, only one species: *S. chinensis* He, from Qinghai Province was previously known. Here a new species from Xizang Autonomous Region of China is described.

2 Materials and Methods

Specimens were examined and measured under a Leica MZ 12.5 (Germany) stereomicroscope. All figures were made by a digital camera (Photometris CoolSNAP) attached on a Zeiss stereomicroscope (Stemi 2000-CS, Germany) and Image Pro Plus software (6.0 version). Type materials are deposited in the Collection of Parasitic Hymenoptera of Zhejiang University, Hangzhou.

Terminology used in the text are followed that of Gauld *et al.* (2002). Abbreviations are used as follows: POL = postocellar line, OOL = oculo-ocellar line. T1, T2, etc., are used for first metasomal tergite and following tergites.

3 Taxonomy

3.1 *Strongyloopsis* Brauns

Strongyloopsis Brauns, 1896. Természetrájsi Füzetek, 19: 274.

Type -species: *Strongyloopsis anomala* Brauns, monobasic.

Diagnosis. Fore wing 4.5 – 10.3 mm, body black or in some species with metasomal tergites reddish. Mandible with apical tip truncate, upper teeth slightly longer than the lower one. Clypeus wide and flat, with apical margin weakly emarginated, separated from face by a faint clypeal suture. Face evenly convex, with upper part strongly bugled. Frons widely concave. Eyes small, with inner margin subparallel. Gena long. Occipital carina complete. Mesosoma robust, more or less depressed. Epomia absent. Mesoscutum smooth, finely and sparsely punctate. Notaulus shallow or indistinct. Submetapleural carina complete. Propodeum long, without longitudinal carina. Legs robust and short, tarsal claw simple without basal lobe. Fore wing usually with 2r-m and 3r-m veins present (in *S. belua* sometimes with 3r-m absent, Kuzin, 1950), hind wing with distal abscissa of 1Cu vein joining 1Cu and cu-a vein above middle. Ovipositor short with upper valve depress at apex, tip of lower valve with vertical ridges.

Distribution. Palearctic Region.

Key to species of *Strongyloopsis* (based on Kasparyan, 1974).

1. Female 2
Male 7
2. Metasoma fully black without reddish segments 3
Metasoma black except T2 and T3 reddish brown, or entirely reddish brown 5
3. Fore wing with areolet quadrilateral; hind leg brown; hind tarsus with 3rd segment equal or longer than 5th segment ... 4
Fore wing with areolet pentagonal; hind leg black; hind

* Corresponding author, E-mail: liujingxian@scau.edu.cn

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- tarsus with 3rd segment shorter than 5th segment *S. xizangensis* sp. nov.
4. Fore wing hyaline with a dark macula on radial cell, with areolet receiving 2m-cu vein at middle, 1m-cu vein with a short stub near middle *S. belua* Kuzin
Fore wing hyaline without a dark macula on radial cell, fore wing with areolet receiving 2m-cu vein at apical 0.28, 1m-cu vein without a short stub near middle *S. chinensis* He
5. Face smooth and shiny, only with a few very fine punctures on upper margin; width of head 1.5 times the length of face and clypeus together *S. rufiventris* Victorov
Face with dense and coarse punctures; width of head 1.7 – 2.0 times the length of face and clypeus together 6
6. Fore wing longer, 1.2 – 1.3 times as long as metasoma *S. anomala* Brauns
Fore wing shorter, 0.9 times as long as metasoma *S. victorovi* Kasparyan
7. Metasoma entirely black 8
Metasoma black except T2 and T3 reddish 9
8. Antenna with tyloids from 5th to 14th flagellomeres; malar space 0.8 times the basal width of mandible; metasomal tergites densely punctate; hind tarsus with 3rd segment not longer than the 5th segment ... *S. abdominalis* Kasparyan
Antenna with tyloids from 1st to 10th flagellomeres; malar space 0.5 – 0.6 times the basal width of mandible; metasomal tergites nearly smooth; hind tarsus with 3rd segment weakly longer than the 5th segment *S. belua* Kuzin
9. Antenna with tyloids from 1st to 15th flagellomeres *S. rufiventris* Victorov
Antenna with tyloids from 4th or 5th to 9th or 15th flagellomeres 10
10. Antenna with tyloids from 5th to 15th flagellomeres *S. anomala* Brauns
Antenna with tyloids from 4th or 5th to 9th flagellomeres ... *S. victorovi* Kasparyan

3.2 *Strongyloopsis xizangensis* sp. nov. (Figs 1 – 11)

Female. Body length 9.0 mm, fore wing length 6.8 mm.

Head (Figs 2 – 4). Face (Figs 2 – 3) wide, nearly quadrate, upper margin sharp with a triangular and slightly cleft projection between antennal sockets, upper part densely punctate, punctures much denser near upper centre and sparser on lower centre. Clypeus (Fig. 3) basally wide and flatten, with sparse punctures on base and apical margin, separated from face by a shallow clypeal suture. Malar space 1.5 times the basal width of mandible. Mandible with apex truncate, upper tooth slightly longer than the lower one. Frons (Fig. 2) concave, with fine punctures. Vertex (Fig. 4) smooth, oblique behind lateral ocellus. Ocular area centrally with a short groove between posterior ocelli. POL: OOL = 1:1. Temple smooth, with sparse and shallow punctures, straight narrowed behind, 0.9 times as long as eye in dorsal view. Antenna (Fig. 7) with 35 segments, flagellum with basal 17 segments wider than long.

Mesosoma. Pronotum (Figs 5, 7) smooth, laterally concave, with anterior dorsal and posterior lower parts striate, anterior lower part and posterior upper corner with fine punctures. Mesoscutum (Fig. 7) and scutellum smooth, sparsely and finely punctate. Scutellum flat. Mesopleuron (Fig. 5) densely and finely punctate. Prepectal carina extending to lower margin of subtegular ridge. Metapleuron (Figs 5 – 6) densely punctate, posteriorly rugulose punctate. Propodeum (Fig. 6) with a shallow longitudinal groove at middle, centrally transversely striate, lateral area punctate, apical area smooth. Spiracle large, oval, closed to pleural carina.

Wings. Fore wing (Fig. 8) with 1cu-a vein distal of Rs & M vein, distance between 1cu-a vein and Rs & M vein 0.28 times the length of 1cu-a vein, areolet pentagonal, receiving 2m-cu vein at apical 0.38, 1m-cu vein curved and with a short stub near middle, stigma 2.0 times as long as wide. Hind wing with distal abscissa of 1Cu joining 1Cu and cu-a vein above 0.28.

Legs (Figs 9 – 10). Stout. Femur and tibia short. Apex of femur with some peg-like spurs. Tibia with peg-like spurs on outer side and apical margin. First to fourth tarsomeres with peg-like spurs at apex. Hind femur 2.2 times as long as its maximum width, hind tarsus with 3rd segment shorter than 5th segment.

Metasoma (Fig. 11). Shiny, densely and finely punctate. T1 1.45 times as long as its apical wide, strongly constricted at base. Ovipositor short, not extend beyond metasoma.

Colour. Body black. Clypeus (basal corner yellowish brown), middle of mandible and palpi reddish brown. Fore leg reddish brown, with coxa and trochanter black, basal half of outer side of femur blackish brown. Middle coxa and trochanter black, femur black with base and apex reddish brown, tibia and tarsus blackish brown. Hind leg black, proximal end of femur reddish brown.

Holotype female, China, Xizang, Moge (29°31'N, 96°34'E; alt. 3 772 m), 11 June 2009, TAN Jiang-Li, No. 200907053.

Host. Unknown.

Distribution. China (Xizang).

Comments. The species is similar to *S. chinensis* He from Qinghai Province, but differs from the latter in fore wing with areolet pentagonal (in *S. chinensis* fore wing with areolet quadrate), 1m-cu vein with a short stub near middle (in *S. chinensis* 1m-cu vein without a short stub), hind tarsus with 3rd segment shorter than 5th segment (in *S. chinensis* 3rd segment equal to 5th segment), hind leg black (in *S. chinensis* hind leg brown except coxa and trochanter black) and POL equal to OOL (the latter with POL shorter than OOL).



Figs 1 – 11. *Strongyloopsis xizangensis* sp. nov., holotype, female. 1. Habitus, lateral view. 2 – 4. Head. 2. Frontodorsal view. 3. Frontal view. 4. Postodorsal view. 5, 7. Head and mesosoma. 5. Lateral view. 6. Posterior half of mesosoma and first tergite. 6 – 7. Dorsolateral view. 8. Fore wing. 9. Middle and hind legs. 10. Fore leg. 11. First to fourth metasomal tergites, dorsal view.

Etymology. The species is named after the type locality.

3.3 *Strongyloopsis chinensis* He, 1996 (Figs 12 – 21)

Strongyloopsis chinensis He, 1996: 163.

Examined materials. Holotype female, China, Qinghai Province, Yushu (32°56'N, 97°16'E), Aug. 1981, QIU Ying-Zhang, No. 820291.

Distribution. China (Qinghai).

Comments. This species is similar to *S. belua* Kuzin but differs from the latter in fore wing areolet receiving 2m-cu vein at apical 0.28 (in *S. belua* fore wing areolet receiving 2m-cu vein at middle), 1m-cu vein without a short stub near middle (in *S. belua* 1m-cu vein with a short stub near middle) and fore wing without a dark macula on radial cell (in *S. belua* with a dark macula on radial cell).



Figs 12 – 21. *Strongyloopsis chinensis* He, holotype. 12. Habitus, lateral view. 13 – 15. Head. 13. Frontal view. 14. Frontodorsal view. 15. Postodorsal view. 16, 18. Head and mesosoma. 16 – 17, 19. Dorsal view. 18. Lateral view. 17. Posterior of mesoscutum, scutellum and propodeum. 19. Posterior part of propodeum and basal two tergites. 20. Wings of right side (show the abnormal areolet). 21. Fore wing of left side, middle and hind legs.

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中国实姬蜂属研究及一新种记述 (膜翅目, 姬蜂科)

何俊华¹ 刘经贤^{2*}

1. 浙江大学昆虫科学研究所 杭州 310058, E-mail: jhhe@zju.edu.cn

2. 华南农业大学资源环境学院 广州 510640

摘要 研究了我国实姬蜂属 *Strongylopus* Brauns, 1896, 描述 1 新种, 西藏实姬蜂 *Strongylopus xizangensis* sp. nov., 并附有特征图。根据 Kasparyan (1974) 的检索表, 对世界实姬蜂属分种检索表进行了改编。模式标本保存在浙江大学膜翅目标本馆。

西藏实姬蜂, 新种 *Strongylopus xizangensis* sp. nov. (图 1 ~ 11)

鉴别特征 本种与中华实姬蜂 *S. chinensis* He 相似, 但可从以下特征与后者区别: 1) 前翅小翅室近五边形 (后者四边形); 2) 前翅 1m-cu 脉中央有 1 脉桩 (后者 1m-cu 脉平滑, 无脉桩); 3) 后足第 3 跗节短于第 5 节 (后者等长); 4) 后足黑色 (后者后足褐色, 仅基节和转节黑色); 5) 后单眼间距与单复眼间距等长 (后者后单眼间距短于单复眼间距)。

关键词 瘤姬蜂亚科, 瘤姬蜂族, 实姬蜂属, 新种。

中图分类号 Q969.544.8

正模 ♀, 西藏莫格 (29°31'N, 96°34'E; 海拔 3772 m), 2009-06-11, 谭江丽采, 编号 200907053。

分布: 中国西藏。

词源: 新种种名源自模式标本采集地地名。

中华实姬蜂 *Strongylopus chinensis* He, 1996 (图 12 ~ 21)

鉴别特征 本种与斑翅实姬蜂 *S. behua* Kuzin 非常相似, 不同之处在于本种: 1) 前翅小翅室容纳 2m-cu 脉与端部 0.28 处 (后者在中央处); 2) 前翅 1cu-m 脉无脉桩 (后者有); 3) 前翅无暗斑 (后者前翅在径室处有暗斑)。

研究标本: 正模 ♀, 青海玉树 (32°56'N, 97°16'E), 1981-08, 邱应章采, 编号 820291。

分布: 中国青海。

* 通讯作者, E-mail: liujingxian@scau.edu.cn